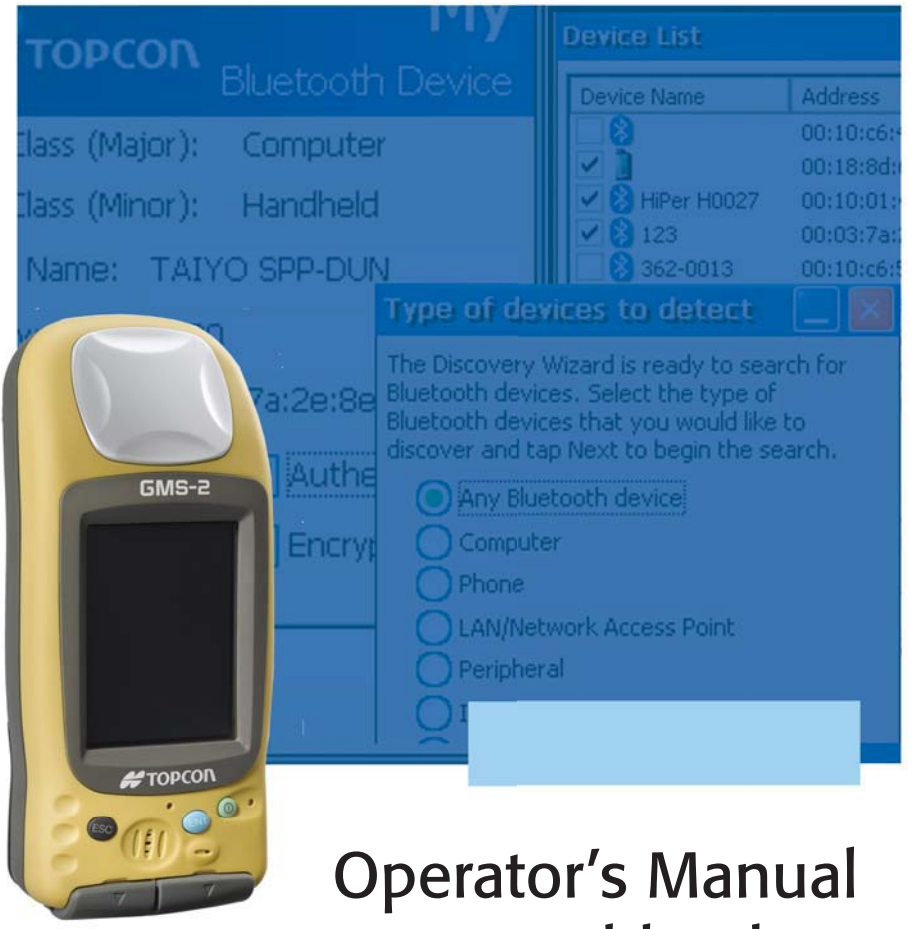
TOPCON

GMS-2
Bluetooth® Manager



Operator's Manual Addendum

TOPCON
POSITIONING SYSTEMS

GMS-2 Operator's Manual
Bluetooth Manager Addendum

Part Number 7010-0865
Rev A

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Getting Started with Bluetooth Manager

This manual describes the Topcon Bluetooth® Manager (BTManager) used on the Topcon GMS-2 integrated GPS+ receiver / hand-held controller system running a Topcon operating system version 1.2 or higher.

The BTManager utility controls the GMS-2 Bluetooth module.

Getting Started

To start BTManager:

1. Turn on the GMS-2.
2. Tap the Bluetooth icon in the system tray, and select **Bluetooth Manager** from the pop-up menu.

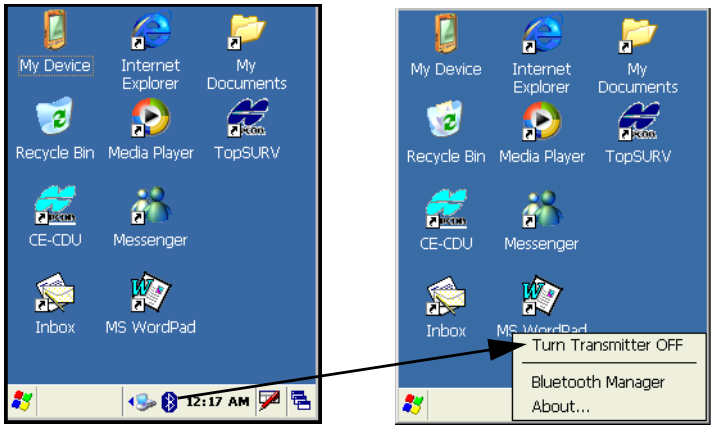


Figure 1-1. Starting Bluetooth Manager

3. If the Bluetooth transmitter is switched off (the Bluetooth icon is gray), select **Turn Transmitter On** to turn on Bluetooth.

Getting Acquainted

Table 1-1 summarizes the screens and settings in BTManager.

Table 1-1. BTManager Screens

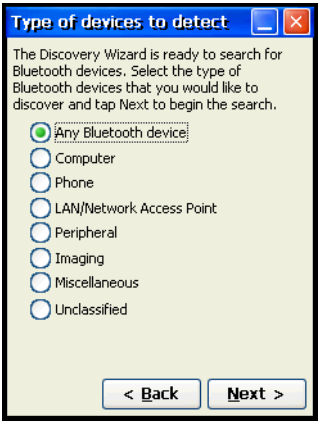
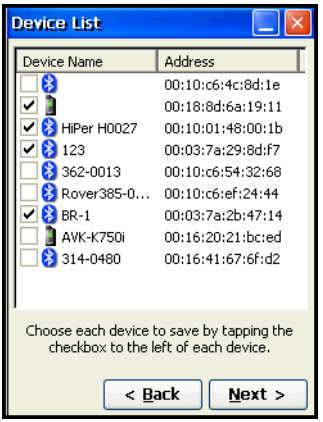
Description	Screen
Type of devices to detect This screen displays types of devices to discover. Once a device type is selected, the *Discovery Wizard* searches for those devices when you tap **Next**.	
Device List This screen displays all discovered devices of a selected type. From this list, you can choose a device to add to your *List of Favorite Devices* by tapping **Next**.	

Table 1-1. BTManager Screens (Continued)

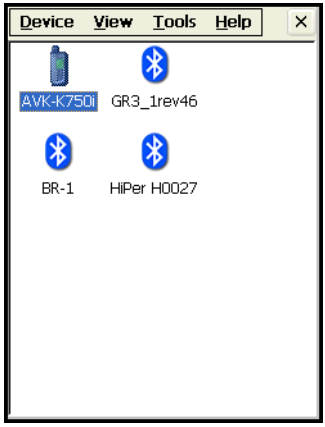
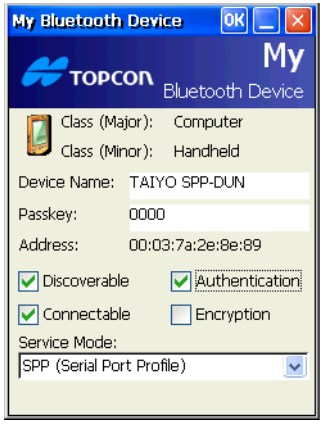
Description	Screen
List of Favorite Devices This screen displays your preferred Bluetooth-enabled devices. You can use the Device Discovery wizard option in the Tools menu or the Bluetooth Devices screen to search for Bluetooth-enabled devices within range and save them to this list for future connections.	
My Bluetooth Device This screen displays the internal GMS-2 Bluetooth module information. On this screen, you can set your preferences and choose how to connect with other devices.	

Table 1-1. BTManager Screens (Continued)

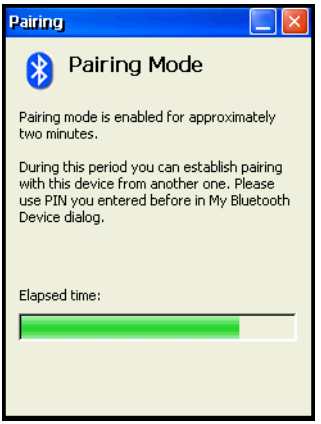
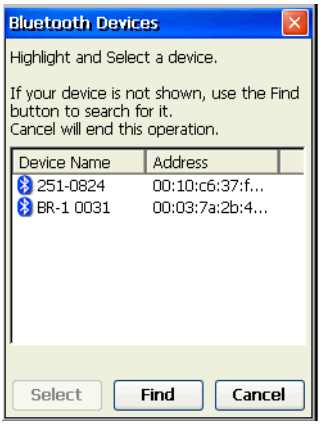
Description	Screen
Pairing This screen displays when the GMS-2 is in pairing mode, and it accepts a pairing request initiated by a remote device.	
Bluetooth Devices This screen displays the List of Favorite Devices. If you do not see a device that you are looking for on this list, then you can tap **Find** to search for it.	

Table 1-1. BTManager Screens (Continued)

Description	Screen
About BTManager This screen displays version and copyright information for BTManager.	

Notes:

Using BTManager

Before the GMS-2 can pair with another Bluetooth-enabled device, it must discover which devices are available within your coverage area. You can use the Device Discovery wizard to search for any Bluetooth-enabled device within range or a particular type of device, and then save the device(s) to your Bluetooth Devices folder for future connections.

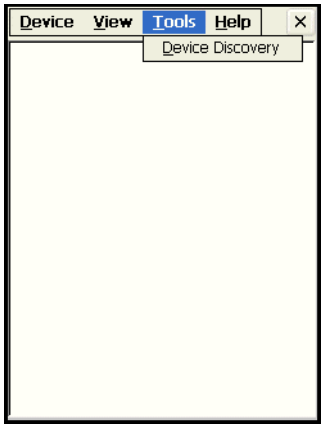


Figure 2-1. List of Favorite Devices

Discovering Devices

To discover other Bluetooth-enabled devices within your coverage area.

1. Tap **Tools ▸ Device Discovery.**
   The *Discovery Wizard* appears (Figure 2-2).

Welcome!
TOPCON
Bluetooth Device
Discovery
Tap Next to discover new Bluetooth devices. Make sure the new devices are on and in Discoverable mode.
< Back
Next >

Figure 2-2. Discovery Wizard

2. Tap **Next** to display a list of device types.

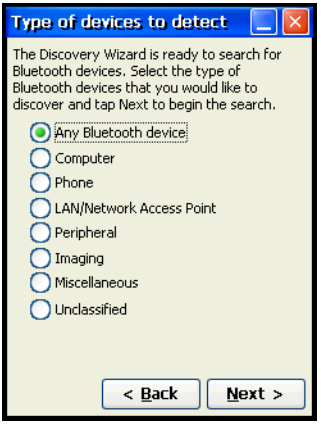

Type of devices to detect
The Discovery Wizard is ready to search for Bluetooth devices. Select the type of Bluetooth devices that you would like to discover and tap Next to begin the search.
Any Bluetooth device
Computer
Phone
LAN/Network Access Point
Peripheral
Imaging
Miscellaneous
Unclassified
< Back
Next >

Figure 2-3. Device Categories

3. Choose a type of device to discover, and tap **Next**.

   The *Discovery Wizard* searches for Bluetooth-enabled devices in your coverage area and displays the icons of the devices it detects on the ***Device List***.

   As device names and addresses are retrieved, the *Device List* updates with detailed information (Figure 2-4 on page 2-3).

Once the *Device List* is populated, you can add any device from this list to the *List of Favorite Devices.*

Only up to nine devices can be discovered at a time. If you select the "Any Bluetooth device" option and the device you want is not displayed in the *Device List* (Figure 2-4 on page 2-3), then select a more specific category to narrow the range of the devices you want to discover.

Adding to the List of Favorite Devices

The *Device List* displays all discovered Bluetooth-enabled devices in your coverage area.

To add a device from the Device List to the *List of Favorite Devices*:

1. Select a device, and tap **Next**. You can choose more than one device.

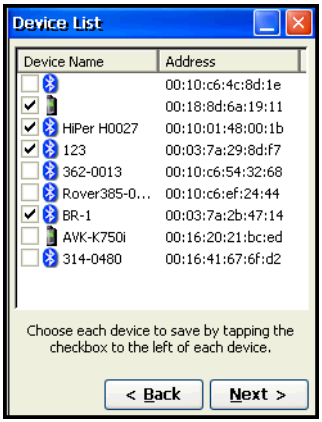


Figure 2-4. Select Device(s)

A confirmation message appears when the devices are successfully added to the *List of Favorite Devices*.

2. Tap **Finish** to exit the *Wizard* and display the *List of Favorite Devices*.

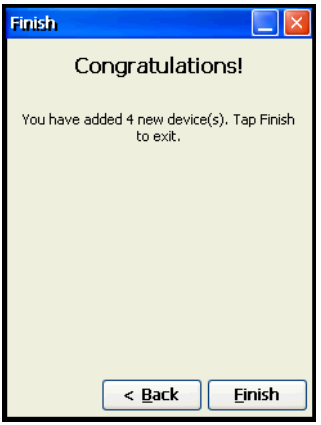


Figure 2-5. Devices Added

To save time, you can save Bluetooth-enabled devices on the *List of Favorite Devices*, so you do not have to rediscover it. You can view devices by icon and name or by name and address.

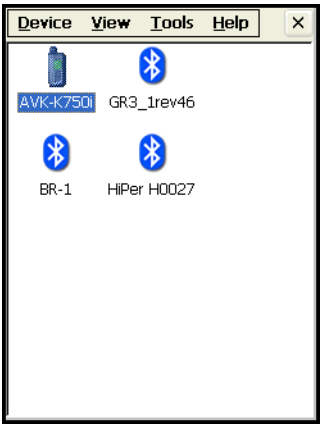


Figure 2-6. List of Favorite Devices

To display the list of devices by name and address, tap **View ▸ Details**.

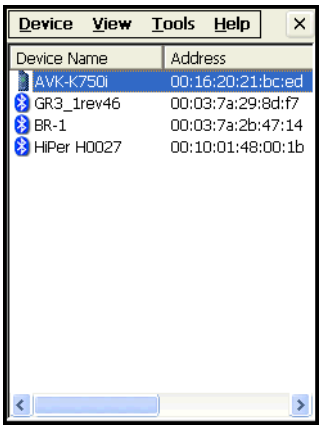


Figure 2-7. Details on Bluetooth Devices

Viewing Device Properties

To view the properties of a device, select the device in the *List of Favorite Devices* (Figure 2-6 on page 2-4), and tap **Device ▸ Properties**.

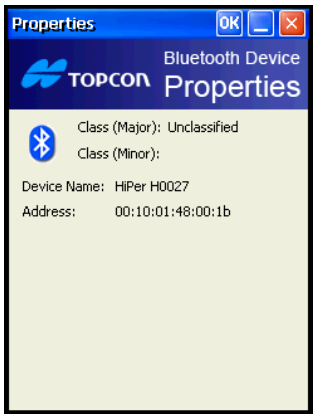


Figure 2-8. Bluetooth Device Properties

The ***Bluetooth Device Properties*** screen displays major and minor class identifiers, the name, and address of the selected device.

Deleting a Device from the List

To delete a device from the *List of Favorite Devices*:

1. Select the device, and tap **Device** ▸ **Delete**.
   A confirmation message appears.
2. Tap **Yes** to delete the device.

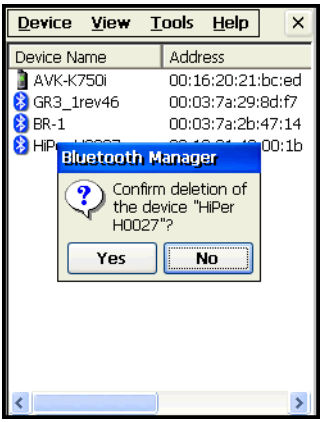


Figure 2-9. Deleting a Device

Setting Device Preferences

The ***My Bluetooth Device*** screen (Figure 2-10 on page 2-7) displays information about the internal GMS-2 Bluetooth module. The preferences you set on this screen determine how your GMS-2 pairs with and connects to remote devices.

To access the My Bluetooth Device screen, tap **Device ▸ My Bluetooth Device**.

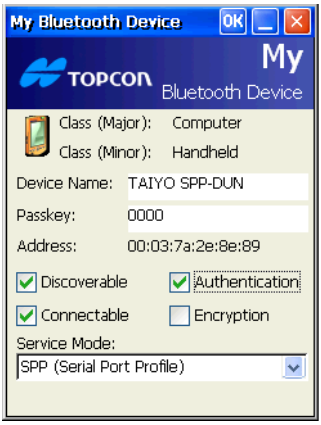


Figure 2-10. My Bluetooth Device

My Bluetooth Device always displays the following information:

- Class (major and minor)
- Name (Other devices use this name to identify the GMS-2.)
- Address

This screen also allows you to enable the following accessibility options:

- *Discoverable:* allows other devices within range to find the GMS-2.
  - It is not necessary to enable this option when initiating a connection from the GMS-2 and for most dial-up networking.
  - When not in use, disable this option manually to save power.
- *Connectable:* allows other devices within range to connect to the GMS-2.

  - It is not necessary to enable this option when initiating a connection from the GMS-2 and for most dial-up networking.
- *Authentication*: authenticates the identity of other devices. Select this option if you want to require a passkey to connect with another Bluetooth enabled device. If either or both devices use authentication, then a passkey must be entered. Once Authentication is selected, the Passkey can be edited.
- *Encryption:* secures all data sent over Bluetooth.

Typically, Topcon Bluetooth-enabled GPS receivers do not require a PIN upon connection. If it is necessary, however, the PIN (up to 16 characters) can be set for a Topcon GPS receiver by BTCONF, the Topcon Bluetooth module configuration program.

Topcon Total Stations require a PIN on connection. Typically, the PIN value is set to “1111”. This value can be changed.

- *Service Mode:* BTManager allows the GMS-2 to connect with other Bluetooth-enabled devices using serial port or dial-up services. The connecting device needs to support the service selected:
  - SPP (Serial Port Profile): provides serial port connection with peripheral Bluetooth-enabled devices, including GPS receivers which normally do not require authentication.
  - DUN (Dial-up Networking Profile): provides a standard to access dial-up services over Bluetooth. The most common scenario is using a mobile phone as a modem.

Pairing Bluetooth Devices

The Pairing Mode allows a remote Bluetooth-enabled device to initiate a request to pair with the GMS-2. If the Pairing Mode option is activated, then the GMS-2 switches to Pairing Mode for two minutes. During this two-minute period, any remote device can attempt to pair with it.

The GMS-2 accepts the first pairing request if the security settings on the remote device match the GMS-2 security settings. You do not need to activate the Pairing Mode option if the GMS-2 initiates the pairing request.

To activate Pairing Mode, tap **Device ▸ Pairing Enable**.

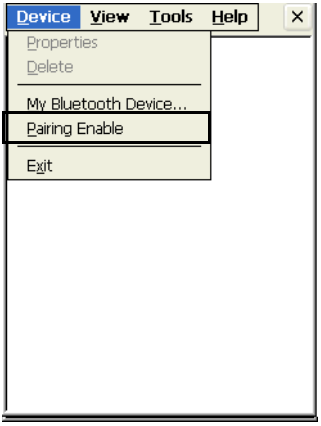


Figure 2-11. Device Menu - Pairing Enable

The ***Pairing*** screen appears, displaying how much time is left to pair with another device.

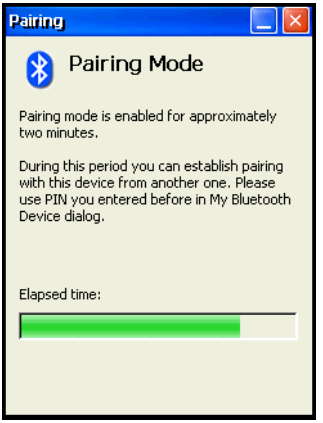

Pairing
Pairing Mode
Pairing mode is enabled for approximately two minutes.
During this period you can establish pairing with this device from another one. Please use PIN you entered before in My Bluetooth Device dialog.
Elapsed time:

Figure 2-12. Pairing Mode

Once the two minutes expires, a message appears stating if the pairing succeeded or failed.

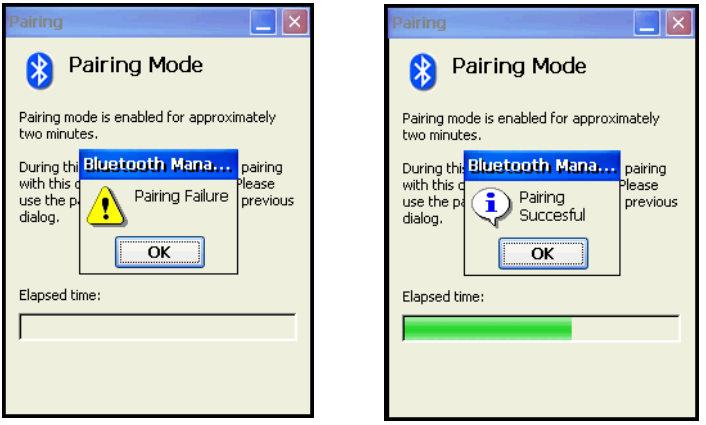


Figure 2-13. Pairing Confirmation

Connecting Devices

The Bluetooth Devices screen displays the List of Favorite Devices, so you can quickly and easily connect with a saved device. If the device you are looking for is not listed, then you can search for up to nine other Bluetooth-enabled devices within range. Make sure the devices you are searching for are discoverable.

To connect with a paired device:

1. From the *Bluetooth Devices* screen, highlight a device, and tap **Select**.

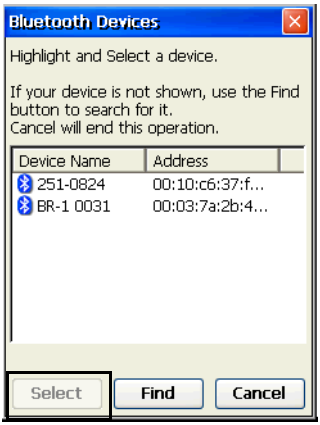


Figure 2-14. Bluetooth Devices - Select

2. If you cannot find a saved device on this screen, then tap **Find**. An hourglass appears while BTManager searches the List of

Favorite Devices and then searches for up to nine nearby Bluetooth-enabled devices.

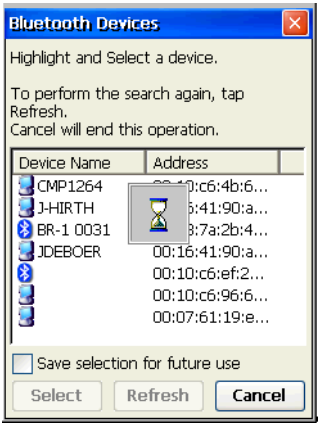


Figure 2-15. Bluetooth Devices - Find

3. After the devices are found, you can:
   - Tap **Refresh** to search again.
   - Highlight a device, and check the **Save selection for future use** check box. This saves the device to the *List of Favorite Devices*.

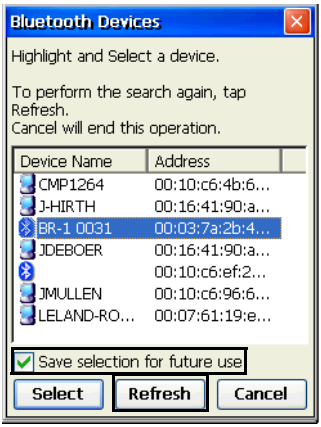


Figure 2-16. Bluetooth Devices - Refresh

If an error message displays upon trying to connect, then it usually means that the security settings of the remote device do not correspond to the security settings of the GMS-2.

To correct this, make sure the PIN, Authentication, and Encryption check boxes on the MyBluetooth Device screen correspond with the security settings of the remote device. See “Setting Device Preferences” on page 2-7 for more information.

Notes:

Troubleshooting

If you encounter an error message while pairing with other Bluetooth-enabled devices, use Table 3-1 to learn which actions to take to correct the error.

Table 3-1. Most Common Errors

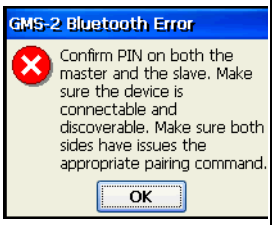
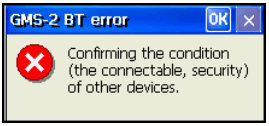
Error Message	Action to Take
	1. The PIN you entered on the My Bluetooth Device page does not match the PIN you entered on the remote device. Make sure the GMS-2 and the remote device use the same PIN. 2. The Connectable setting was not selected on the remote device or the device was switched off. Make sure the remote device is on and the Connectable check box on the My Bluetooth Device page is selected. 3. The remote Bluetooth device is already being used and it does not support simultaneous Bluetooth connections. Close the connection between the remote device and other device.
	Set the same parameters for authentication and encryption on both devices and try to connect again.
	1. The remote device does not support the Service Mode you selected. On the My Bluetooth Device page, select another Service Mode. 2. There is a critical problem with the Bluetooth module. Clear the NVRAM of the GMS-2. See the operator's manual for more information.

Table 3-1. Most Common Errors (Continued)

Error Message	Action to Take
	Another application is using the GMS-2 COM2 serial port. Close the application or release the port. The COM2 serial port is reserved for the Bluetooth Manager.
	Port B of the GMS-2 GPS receiver, through which the Bluetooth Manager connects to the Bluetooth module, is not in command mode. Change Port B input mode back to command mode or clear the GMS-2 NVRAM. See the Operator's Manual for more information.

Notes:

Notes:

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